

**NATIONAL GALLERY OF ART
INFORMATION TECHNOLOGY PROGRAM
FY 2011**

The National Gallery of Art depends heavily on Information Technology (IT) to support its interaction with the public and the staff. The Gallery's IT environment is a complex infrastructure consisting of 10 major IT systems serving the multi-faceted requirements of the Gallery including acquisition, care and display of works of art, special exhibitions and education programs, as well as financial and administrative management. The basic daily operations, beginning with opening the Gallery to the public each morning, require a variety of systems such as those for security, building automation, collections management, education, financial management, and retail.

IT supports many other non-major systems that nevertheless play a critical role in the day-to-day functions of the institution. Such systems include the VISTA scheduling system for school and group tours, a facilities' work order tracking system, a fixed asset tracking system, a check writing system, and computer-assisted design (CAD) systems used by the Gallery's architects, designers and engineers.

IT is also central to the Gallery's risk management strategy as many of the systems require sophisticated IT support, from advanced climate control and security to collection, library, and financial management. The failure of any of these mission critical systems jeopardizes the security and safety of the works of art, staff and visitors and impedes the ability of the staff to meet performance goals and management initiatives.

Through the Gallery's web site, educational resources on the collection and special exhibitions offer anyone with Internet access features ranging from virtual tours to planning an actual visit and researching the collection. The Gallery's educational role is also supported by IT through the Internet/Intranet/Office Automation systems which provide the public with direct communication through its web site and e-mail and enable efficient staff communication throughout the Gallery.

The Gallery's FY 2011 IT budget submission is based on the implementation of its IT Strategic Plan. IT improvements have required multiple years to implement – up to one year to prepare the solicitation packages and select a vendor, and then up to two years to install, configure and test the new systems. This plan addresses the proactive replacement, repair, and stabilization of the Gallery's mission critical systems.

The Gallery's IT environment is divided into the following categories:

- Art Care Systems
- Operations and Maintenance Systems
- Protection Systems
- General Administration Systems
- Enterprise Architecture and Planning

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Current State of the Art Care Systems

Collection Management System (CMS): The Gallery uses *The Museum System (TMS)*, a commercial off-the-shelf system that is used extensively throughout the museum community, to manage the art. This system was acquired and became operational in FY 2008. Planned enhancements to TMS are being made and provided to the Gallery by Gallery Systems, Inc., the TMS vendor. The risk of failure to CMS is low.

Integrated Library System (ILS): The Gallery continues to use the Ex Libris commercial off-the-shelf *Voyager* system as its Integrated Library System. Digital library products are supported using *DigiTool* and *MetaLib* products from Ex Libris. A strong technology refreshment program is in place for these systems. The risk of failure to ILS is low.

Digital Imaging Program: The Gallery's archives of slides and color transparencies are degenerating. In order to preserve quality images of the collection, this aging technology must be replaced to prevent further deterioration of the images of the works of art and to archive for future generations images of the works of art as they appear today. The Gallery's digital imaging strategy, based on a number of recommendations from an internal study, has resulted in the creation of a digital photographic laboratory and the development of a prototype central electronic repository and management system for digital images of works of art in the collection. The project also included the deployment of an image work order production system. A new project to procure an image licensing system was recently initiated. The risk associated with the digital imaging program is medium as the Gallery lacks an enterprise-wide system for management of the digital assets of the collection.

Gallery Web Site: The Gallery's original web site was deployed in 1996 and for many years was an award winning site, but it now has become a dated resource failing to take advantage of emerging technologies to better serve the public. A contract for the redesign of the web site has been awarded. The project's discovery and strategy phase is complete and work is commencing on the development of the new site. The risk assigned to the web is medium.

Current State of the Operations and Maintenance Systems

Building Automation System (BAS): The current system, Honeywell's *Enterprise Building Integrator (EBI)*, was acquired and became operational in FY 2006. One of the Gallery's key goals is to expand the coverage for monitoring and controlling temperature and relative humidity conditions throughout the Gallery complex by adding non-proprietary controllers to the BAS. A contract was recently awarded to Honeywell to upgrade EBI to release 4.0, apply missing IT security patches, and perform life cycle maintenance. The risk of failure assigned to this system is medium and will remain at that level until the system is upgraded and all identified IT security patches are applied.

Current State of the Protection Systems

Integrated Security Management System (ISMS): The Gallery continues to use Seibold's *Skyline II*, which was acquired and became operational in FY 2006, as its

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ISMS. A strong technology refreshment program is in place for this system. The risk of failure assigned to the security system is low.

Fire Control System: The Gallery uses the Siemens Cerebus-Pyrotronics *MXL/MXLV* system to protect the staff, visitors, Gallery facilities, and its collection of original works of art. While the fire control system still protects the Gallery, the proprietary display unit in the security control center greatly limits the ability of the operations staff to efficiently identify the precise location of alarms. In addition, this UL-certified device has unsupported technology (Windows NT operating system) as a key part of its architecture. The risk of failure assigned to this system is medium and rising.

Current State of the General Administration Systems

Financial Management System (FMS): The Gallery uses *Oracle Federal Financials*, a web-based, externally hosted OFFM-compliant system as its FMS. Phase I of the new financial system was deployed in FY 2007. Phase II of the new system was deployed in FY 2008. The risk of failure assigned to FMS is low.

Gallery's Intranet: The intranet provides Gallery staff with useful information on Gallery policies and business processes, including forms and instructions for accounting, personnel, travel, and procurement as well as a telephone directory and policy circulars. In order to realize the full potential of this important resource, the Gallery has initiated a phased redesign of the intranet. Several workflow projects are underway that allow Gallery staff to access additional information on-line. The risk assigned to the intranet is medium.

General Support System (GSS)

- **Office Automation (OA):** The Gallery has now standardized and modernized its OA environment. Current Gallery-wide desktop Intel-based PC and Apple Macintosh hardware platforms are in place with standardized Microsoft Windows XP/Office XP and Macintosh OS 10 system software supported by an outsourced Help Desk. Inventory control of the OA assets has increased with the use of an on-line inventory management system and bar coding of equipment. The IT security of the OA environment has been enhanced with the development of a strong IT Security program and the addition of virus protection software throughout the OA architecture. A highly successful on-site OA training program has been implemented. The risk of failure to office automation remains low.
- **Data Network:** The Gallery's current data network infrastructure, which supports the 10 major IT mission systems and over 1,000 workstations, is out-of-date and highly unstable. The existing network is unable to handle the current data traffic and is being replaced in phases. The first and second phases, the purchase and installation of new core switches and the wiring from the core switches to the data closets, are complete. Phase 3, a multi-year activity, is underway. This phase involves the replacement of the routers and wiring within the data closets and the

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wiring to the desktops. The risk of failure to the data network will remain high until phase 3 is complete.

- **Telecommunications:** The Gallery has an extensive telecommunications infrastructure that supports voice, wireless, data cabling, and video communications. Although the main PBX and Voicemail systems are state of the art, numerous telephones and other telecommunications subsystems are well beyond their normal lifespan and must be replaced. The risk of failure is low for the PBX and Voicemail subsystem and high for the telephones and the telecommunications subsystems.

FISMA/IT Security Program: Gallery-wide IT security was a high priority in FY 2009 and the Gallery continued to make progress in meeting FISMA requirements. An independent contractor was selected to assist the Gallery with Certification and Accreditation (C&A) of the major IT systems.

Current State of Enterprise Architecture and Planning

Enterprise Architecture: The Gallery continues to maintain its Enterprise Architecture Modernization Blueprint. The blueprint identifies emerging needs in data warehousing of archival, conservation and curatorial records; mass storage requirements for digital images; the need for central management of art related scheduling activities; a central inventory management system; and a personnel database that incorporates the OPM mandated electronic Official Personnel File (e-OPF). These new initiatives are mapped to OMB's Federal Enterprise Architecture Framework. IT drivers for the "To-Be" architecture were updated and have been included in the Gallery's IT Strategic Plan.

Capital Planning and Control Process (CPIC): The Gallery's IT Steering Committee (ITSC) continued its role in the selection, control and evaluation of major IT system projects as documented in our CPIC process. The ITSC established the priorities for the IT budget based on mission need and continued its oversight of all major IT modernization efforts. The Gallery continued to focus on IT risk management, adherence to the Gallery's enterprise architecture, and inclusion of IT security as part of the modernization programs.

FY 2009 Accomplishments

Art Care: Phase 1b of CMS was deployed, providing functionality for management of inseparable objects and creation of shipping plans. Additional functionality was also provided to the Gallery's Risk Management personnel through creation of additional Insurance reports and an under-insurance e-mail alert.

A major upgrade of the ILS *Voyager* software was completed, featuring a new, standards-based Web interface. The slides and photographs databases were successfully merged to provide single access to the Library's image collection. The migration to ILS *MetaLib* was completed, providing Gallery staff with more accessibility

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to subscription databases. Migration from the unsupported *Encompass* software tool to the Ex Libris' *DigiTool* digital asset management system was completed.

The *NGA Images* contract was awarded, advancing the capabilities of the Digital Imaging program. This new system will consist of two parts: a public facing, front-end web site which will provide the public with images of the works of art, and a back-end system which will provide management of the rights associated with these works of art.

New servers were acquired for hosting the existing web site, providing a stable and reliable platform for operations, while the web modernization project proceeds.

Operations and Maintenance: New alarm points were connected to the BAS in the East Building Study Center and East Building art spaces.

Protection: Issuance of HSPD-12 compliant badges continued with a significant portion of Gallery employees receiving the new badges by the end of FY 2009.

General Administration: FMS was upgraded to provide an automated interface to GSA's Federal Procurement Data System (FPDS). Efforts continued on development of additional user reports and user training.

Accomplishments on the data network modernization project included completion of the Division 27 network wiring standard, survey of the existing telecommunication rooms and pathways, development of a rough order cost estimate for phase 3 of the project, acquisition of a Cable Record documentation system, and renovation of the Help Desk telecommunications room in accordance with the Division 27 standard.

The FMS-200 fire suppression system and a new HVAC system were acquired and installed in the Gallery's Data Center.

Technology refreshment of the Gallery's office automation system continued with the purchase and deployment of new workstations, monitors, printers and scanners. Software upgrades were provided for workstations operating systems (Microsoft Windows XP and Mac OS 10.5), Filemaker Pro, Adobe Creative Suites, and AutoCAD.

The assessment phase of the e-OPF project was completed and an inter-agency agreement was put in place with the Office of Personnel Management (OPM) for the "Day Forward" processing to begin.

Requirements were identified for a data warehouse for central storage of conservation and curatorial records.

The IT Security Program focused on encryption of laptops, protection of Personally Identifiable Information (PII) and configuration of desktops using the Federal Desktop Core Configuration (FDCC) standard.

Certification and Accreditation (C&A) was completed for the General Support System (GSS) and risk assessments and system classifications were completed for the Retail Management System (RMS) and Financial Management System (FMS). Deficiencies uncovered during the C&A were documented and are being tracked in the IT Security Plan of Action and Milestone (POA&M) database. Policy and procedures

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were developed for IT Incident Response and for remote access. The infrastructure required to support auditing and logging was acquired and installed. Work on IT Business Continuity was initiated.

Desktop personal computers were configured using the FDCC and a similar configuration was used to “lock down” the Macintosh computers. Gallery laptops were encrypted with the acquisition of the Pointsec encryption tool, satisfying the requirements of OMB M-06-16. The annual independent internal and external scan of the data and security networks was performed and IT security vulnerabilities discovered were remediated. Weekly and monthly reporting of virus and spam activity continued. Monthly reporting on the deployment of Microsoft-related IT security patches continued. Metrics were captured on suspended network accounts and failed attempts to access the Gallery’s remote access system. A priority was placed on IT Security Awareness training and all users of the Gallery’s network received the required annual refresher training.

FY 2010 Objectives

In FY 2010, the Gallery will continue to maintain and enhance the 10 major IT systems through a strong technology refreshment program.

Art Care: Phase 2 of CMS will be completed and deployed, providing functionality for updating exhibition and loan records in “batch” mode, accessioning objects in lots rather than individually; and systematic processing of extended load periods. The *NGA Images* e-commerce site will be configured and deployed, along with its back-end system for managing rights for the works of art. Implementation of the Gallery’s re-designed web site will continue.

Operations and Maintenance: The BAS will be upgraded and maintained through a new maintenance contract with Honeywell.

Protection: The Gallery will complete the re-badging of staff in accordance with the HSPD-12 directive. An upgrade to the *DvTeI* subsystem of the ISMS will be accomplished. A new COTS Incident Response Management Information System will be acquired, configured and deployed

General Administration: Work on the Phase 3 network modernization project will continue with renovation of four telecommunication rooms and the adjoining staff offices in the Connecting Link.

Back-end conversion of OPF files will be completed, providing Gallery staff with on-line access to their personnel folders through the e-OPF portal.

The Gallery will continue to put a high priority on FISMA compliance. C&A’s will be completed for the RMS, FMS, and Physical Protection Program (ISMS and Fire Control systems). Efforts will continue on resolving deficiencies discovered and documented in the POA&M as a result of IT security activities performed in FY 2009.

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FY 2011 IT Budget Request and Key Initiatives

\$6,954,000 is requested for IT in FY 2011, representing an increase of \$140,000 over the FY 2010 Budget Request.

Art Care: \$556,000 is requested for Art Care IT systems in FY 2011, an increase of \$54,000 over the FY 2010 budget. This increase is needed for the maintenance costs of the new software for the re-designed Web site. The remainder of the budget is for the steady state costs for maintaining the CMS, ILS, and Digital Imaging.

Operations and Maintenance: \$125,000 is requested for Operations and Maintenance IT programs in FY 2011, the same as the FY 2010 level. These funds will be used to maintain the BAS.

Protection: \$405,000 is requested for Protection IT programs in FY 2011, the same as FY 2010. These funds are used to maintain and support the ISMS.

General Administration: \$5,868,000 is requested for General Administration IT systems, an increase of \$86,000 over the FY 2010 budget. The increase provides funding for additional IT security projects, to include conduct of the remaining C&A's (Art Care systems and the BAS), and resolution of deficiencies documented in the Gallery's IT Security Plan of Action and Milestone (POA&M), with special focus on Business Continuity of the critical IT systems. The remaining funds are for the steady state costs of the G&A IT projects. These projects include FMS, the Intranet, Office Automation, the Network, IT Security, Enterprise Architecture, Telecommunications and National Finance Center fees for Personnel & Payroll processing.

Included on the following pages is the Gallery's FY 2011 Information Technology Budget.

**NATIONAL GALLERY OF ART
INFORMATION TECHNOLOGY (IT)
FY 2010 and FY 2011
(\$000's)**

	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2011 Increase/ (Decrease) FY 2010</u>
ART CARE			
<u>Services</u>			
Collection Management System (CMS)	\$ 60	\$ 60	\$ -
Integrated Library System (ILS)	84	84	-
Digital Imaging	50	50	-
Web Site	238	312	74
subtotal	<u>432</u>	<u>506</u>	<u>74</u>
<u>Equipment</u>			
Integrated Library System (ILS)	20	-	(20)
Digital Imaging	50	50	-
subtotal	<u>70</u>	<u>50</u>	<u>(20)</u>
Total Art Care	<u>502</u>	<u>556</u>	<u>54</u>
OPERATIONS AND MAINTENANCE			
<u>IT Services</u>			
Building Automation System (BAS)	50	115	65
<u>IT Equipment</u>			
Building Automation System (BAS)	75	10	(65)
Total Operations and Maintenance	<u>125</u>	<u>125</u>	<u>-</u>
PROTECTION			
<u>IT Services</u>			
Integrated Security Management System (ISMS)	380	380	-
<u>IT Equipment</u>			
Integrated Security Management System (ISMS)	25	25	-
Total Protection	<u>405</u>	<u>405</u>	<u>-</u>

**NATIONAL GALLERY OF ART
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(\$000's)**

	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2011 Increase/ (Decrease) FY 2010</u>
GENERAL ADMINISTRATION			
<u>IT Services</u>			
Financial Management System (FMS)	\$ 818	\$ 487	\$ (331)
Intranet	486	506	20
General Support Systems (GSS)	2,206	2,347	141
GSS - Telecommunications	550	550	-
IT Security	375	591	216
Enterprise Architecture	176	182	6
Personnel/Payroll Processing	121	155	34
subtotal	<u>4,732</u>	<u>4,818</u>	<u>86</u>
<u>IT Supplies</u>	40	40	-
<u>IT Equipment</u>			
General Support Systems (GSS)	980	980	-
GSS - Telecommunications	30	30	-
Personnel/Payroll Processing	-	-	-
subtotal	<u>1,010</u>	<u>1,010</u>	<u>-</u>
Total General Administration	<u>5,782</u>	<u>5,868</u>	<u>86</u>
GRAND TOTAL IT BUDGET	<u>\$ 6,814</u>	<u>\$ 6,954</u>	<u>\$ 140</u>
SUMMARY BY OBJECT CLASS			
Total Services	\$ 5,594	\$ 5,819	\$ 225
Total Supplies	40	40	-
Total Equipment	<u>1,180</u>	<u>1,095</u>	<u>(85)</u>
GRAND TOTAL IT BUDGET	<u>\$ 6,814</u>	<u>\$ 6,954</u>	<u>\$ 140</u>